



# United States Patent (19)

Jo et al.

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[54]	ADAPTIVE VARIABLE-LENGTH CODING AND DECODING METHODS FOR IMAGE
	DATA

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References Cited [56]

## U.S. PATENT DOCUMENTS

5,329,318 7/1994 Keith ...... 348/699 5.377.051 12/1994 Lane et al. ...... 360/33.1

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[57]

#### **ABSTRACT**

An adaptive variable-length coding/decoding method performs an optimal variable-length coding and decoding depending on an intra mode/inter mode condition, quantization step size and a current zigzag scanning position. such that a plurality of variable-length coding tables having different patterns of a regular region and an escape region according to statistical characteristics of the run level data are set. One of the variable-length coding tables is selected according to mode, quantization step size and scanning position, and the orthogonal transform coefficients according to the selected variable-length coding table are variablelength-coded.

### 7 Chaims, 7 Drawing Sheets

